FOREWORD

The Federal Aviation Administration (FAA) submits the Aviation System Capital Investment Plan (CIP) annually to the United States Congress in accordance with Title 49 United States Code, Section 44501 (b).

The CIP is a 5-year plan that describes and provides the status of all FAA facilities and equipment (F&E) programs currently in progress and identifies approved near-term capital investments. F&E programs are organized into a common format by NAS functional area (i.e., automation, communications, facilities and associated systems, mission support, navigation and landing, surveillance, and weather). The CIP also describes the FAA's capital planning framework and presents an overview of National Airspace System (NAS) modernization and related activities. The plan is a reference for FAA field and headquarters personnel and other members of the aviation community on basic information about F&E programs.

Companion investment planning documents to the 1999 CIP are the *NAS Architecture, Version 4* and the *Blueprint for NAS Modernization.* These planning tools are used for continuing dialogue among the FAA, the NAS user community, and other stakeholders in NAS modernization activities.

The NAS Architecture is a 15-year plan for NAS modernization and sustainment of evolving services. It describes what and when NAS capabilities and services are available, based on expected FAA funding and the interdependent timing of facilities, equipment, people, and procedures necessary to provide the capabilities. The NAS Architecture will change due to joint Government/industry concept of operations (CONOPS) changes, due to resource changes, or due to investment analyses and FAA decisions that define how a capability will be developed and deployed. The wealth of information contained in the NAS Architecture and its companion data base will be used to perform architecture impact assessments for agency investment decisionmaking; it is a resource for FAA and user planning for future capital investments. The NAS Architecture is available on the Internet at *http://www.faa.gov/nasarchitecture.*

The *Blueprint for NAS Modernization* is an overview of the NAS Architecture that describes the modernized NAS capabilities and the schedule for delivery of services. It includes capabilities that affect the users, but not all capabilities found in the NAS Archi-

tecture. The *Blueprint for NAS Modernization* represents the FAA's commitment to the user community and is expected to be the basis for user participation in the configuration management of the NAS Architecture. The aviation community can recommend changes to this document, in terms of capabilities and schedules, based on consensus within the community. RTCA, Inc., a Congressionally chartered Federal advisory committee, will be responsible for managing the development of the consensus recommendations leading to a change in the *Blueprint for NAS Modernization* (also available on the FAA Web site).

The CIP content reflects the NAS Architecture as well as the most recent Congressional direction for FAA capital investments. Key changes in the CIP content and format from the previous version include:

- Addition of a foreword

- Addition of summaries of new mission needs expected to require funding in the next 5 years

- Addition of an appendix of definitions

- Elimination of chapter on project relationships:
  - Project interdependencies are identified in the NAS Architecture

- Elimination of benefit-cost ratios from individual project descriptions:
  - Risk-mitigation-related restructuring of many programs requires updated benefit-cost studies.

Program, project, or system changes made since the previous plan are included below—except for updates to ongoing programs. These updates are identified in the index to each functional area in Chapter 4. Change categories are defined as follows.

- *Combined:* A former stand-alone project aggregated with one or more other stand-alone projects to form a new project

- *Completed:* A project or program that has completed solution/implementation and has been transferred to inservice management

- *Inactive:* A project currently without funding or without accomplishments to report since the most recent publication of the CIP, but that has not been withdrawn from the CIP by the sponsor

- *Re-baselined*: A project that has a schedule, cost, benefits, or performance baseline change since the most recent publication of the CIP

- *Restructured*: A project that has had a Program Office change or has been rescoped (e.g., elimination of certain requirements or changed to fee-for-service) since the most recent publication of the CIP

- *Terminated:* A previously approved acquisition project whose acquisition program baseline has been revoked by the JRC

- *Withdrawn:* A previously approved acquisition project that is temporarily or permanently removed from the CIP by the sponsor for technical reasons.

Inactive	
A02	Tower Automation Program
C24	FAA Skylinks
W01	Aviation Weather Observation System (AWOS) Replacement
Combined	
A12	Airport Surface Target Identification System (ATIDS) [combined with S-09, Runway Incursion Reduction Program]
Restructured/Rebaselined	
A03	Automated Radar Terminal System (ARTS) Improvements
M07	National Infrastructure Management System (NIMS)
M10	Distance Learning (restructured to fee-for-service)
M11	Aircraft Related Equipment (new program office)
Completed (1/97–9/98)	
A01	Display Channel Complex Replacement (DCCR)
A03	Automated Radar Terminal System (ARTS) IIA
A03	Automated Radar Terminal System (ARTS) IIIA
A03	Automated Radar Terminal System (ARTS) IIIE (A6.05)
A13	Digital Bright Radar Indicator Tower Equipment (DBRITE)
A15	Civil Aviation Registry Modernization
C01	M1 Console—Voice Switching and Control System (VSCS)
C15	FAA Telecommunications Satellite (FAATSAT)
C20	Tower Data Link System (TDLS)—Aeronautical Data Link (ADL)
C20	Terminal Weather Information for Pilots Service - Aeronautical Data Link (ADL)
C22	VHF Extended Range Network (VERN) Radios—Gulf of Mexico
M08	Time Code Displays—Continued General Support
M13	Precision Automated Tracking System (PATS)
M18	Computer Resources Nucleus (CORN) (replaced by ICE-MAN contract)
M27	National Airspace Integrated Logistics Support (NAILS)
N03	End Fire Glide Slope (EFGS) Antenna System—Instrument Landing Systems
S05	Long-Range Radar Radome Replacement
W01	Automated Weather Observation System (AWOS)—(initial deployment)
W01	AWOS Data Acquisition System (ADAS)—(initial deployment)
W06	Digital Altimeter Setting Indicator (DASI) Replacement (initial buy)
New Programs Funded in FY 1997	
A21	Conflict Probe
C21	Next-Generation Air/Ground Communications System (NEXCOM) (Described in 1997 CIP)
C23	Voice Recorder Replacement Program (VRRP) (Described in 1997 CIP)
F22	Relocate Honolulu Combined Center Radar Approach Control (CERAP) (Described in 1997 CIP)
M08	Year-2000 Computer Problem
M33	Advanced Airport Security Systems

New Programs Funded in FY 1998	
M08	Acquire (Program Management System)
M31	NAS Information Security System (Reprogrammed Funds)
N09	Sustain Distance Measuring Equipment (Described in 1997 CIP)
N10	Sustain Nondirectional Beacon (NDB) (Described in 1997 CIP)
New Programs Funded in FY 1999	
F24	Facility Security Risk Management
M08	Operations Concept Validation (transferred from research)
M08	System Capacity Planning and Improvements (transferred from research)
M34	Airport Technology (transferred from research)
M35	General Aviation and Vertical Flight Technology (transferred from research)
M36	Alaska Capstone Initiative/Safe Flight 21 (transferred from research)
M37	Cockpit Technology (transferred from research)
N13	Transponder Landing System (Congressional Add)
S09	Runway Incursion Reduction Program (transferred from research)
S10	Automatic Dependent Surveillance Broadcast (ADS-B) (transferred from research)
New Programs Proposed for FY 2000	
A22	Free Flight Phase 1 (FFP1) Integration
A23	NAS-Wide Information Services (NIS)
C25	Automated Flight Service Station Voice Switches (AFSSVS)
C26	FAA-Integrated Communications System for the 21st Century (FICS-21)
M08	NAS Requirements Development Support—Continued General Support
Program/Project Title Changes	
C21	Next-Generation Air/Ground Communications System (NEXCOM) (formerly Next Generation Air/Ground Radio Communications System)
F02	Large TRACON's (formerly Large Consolidated TRACON's)
F05	Flight Service Station Modernization (formerly Flight Services Facilities)
M03	CIP System Engineering (formerly CIP System Engineering and Technical Assistance)
M20	NAS Training Modernization (formerly National Airspace System Training)
M21	Asset Supply Chain Management (formerly Logistics Support Systems and Facilities)
W01	Aviation Surface Weather Observation Network (ASWON) (formerly Aviation Weather Observation System)